

Claims

- [1] 1. A thin film transistor array panel comprising:
a gate line formed on an insulating substrate including a gate electrode;
a gate insulating layer on the gate line;
a semiconductor layer on the gate insulating layer;
a data line formed on the gate insulating layer and including a source electrode;
a drain electrode formed at least in part on the semiconductor layer;
a color filter formed on the data line and the drain electrode and having a first opening exposing the drain electrode at least in part;
a light blocking layer formed on the color filter;
a passivation layer formed on the color filter and the light blocking layer and having a contact hole exposing the drain electrode through the first opening of the color filter;
a pixel electrode formed on the passivation layer and contacting the drain electrode through the contact hole; and
a spacer formed on the passivation layer and disposed opposite the light blocking layer.
- [2] 2. The thin film transistor array panel of claim 1, wherein the light blocking layer comprises organic material including black pigment.
- [3] 3. The thin film transistor array panel of claim 1, wherein the spacer comprises organic material.
- [4] 4. The thin film transistor array panel of claim 1, further comprising a storage conductor formed on the gate insulating layer, overlapping the gate line, and electrically connected to the pixel electrode.
- [5] 5. The thin film transistor array panel of claim 4, wherein the color filter has a second opening exposing the storage conductor at least in part and the passivation layer further has a second contact hole exposing the storage conductor at least in part through the second opening for connection between the storage conductor and the pixel electrode.
- [6] 6. The thin film transistor array panel of claim 1, further comprising a storage electrode formed under the gate insulating layer and overlapping the pixel electrode.
- [7] 7. The thin film transistor array panel of claim 6, further comprising a storage conductor formed on the gate insulating layer, overlapping the storage electrode,

and electrically connected to the pixel electrode.

- [8] 8. The thin film transistor array panel of claim 7, wherein the color filter has a second opening exposing the storage conductor at least in part and the passivation layer further has a second contact hole exposing the storage conductor at least in part through the second opening for connection between the storage conductor and the pixel electrode.
- [9] 9. The thin film transistor array panel of claim 1, wherein the passivation layer comprises acrylic material or a chemical vapor deposition film having a dielectric constant smaller than 4.0.
- [10] 10. The thin film transistor array panel of claim 1, wherein the semiconductor layer has substantially the same planar shape as the data lines and the drain electrodes except for a portion between the source electrode and the drain electrode.
- [11] 11. A liquid crystal display comprising:
a first panel including a gate line, a data line, a thin film transistor connected to the gate line and the data line, a pixel electrode connected to the thin film transistor, and a light blocking layer including organic material and black pigment;
a second panel facing the first panel and including a common electrode; and
a spacer disposed between the first panel and the second panel to form a gap therebetween and overlapping the light blocking layer.
- [12] 12. The liquid crystal display of claim 11, further comprising a color filter formed on the first panel and having an opening exposing the drain electrode at least in part.
- [13] 13. The liquid crystal display of claim 11, further comprising a protrusion formed on at least one of the first and the second panels, having a height smaller than the spacer, and having a slanted lateral surface.